



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,160	01/30/2002	Takeshi Miyakawa	218222US0PCT	1444

22850 7590 07/06/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

CHEVALIER, ALICIA ANN

ART UNIT PAPER NUMBER

1772

DATE MAILED: 07/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/030,160	<b>Applicant(s)</b> MIYAKAWA ET AL.	
	<b>Examiner</b> Alicia Chevalier	<b>Art Unit</b> 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **RESPONSE TO AMENDMENT**

1. In view of the Appeal Brief filed on April 7, 2006, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

2. Claims 10-15 are pending in the application, claims 1-9 have been cancelled.

### ***REJECTIONS***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

4. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenz et al. (U.S. Patent No. 5,361,901) in view of Maeda et al. (U.S. Patent No. 5,346,765).

Art Unit: 1772

Schenz discloses an embossed carrier tape (*title*) comprising a sheet having at least one embossed pocket (*figure 2 and col. 6, line 5*) comprising at least one thermoplastic resin other than a polyphenylene ether resin, such as polyvinyl chloride resin, polyester, etc. (*col. 5, lines 62-68*), wherein at least on surface of the sheet has a surface resistance of at most  $10^{12} \Omega/\square$  (*col. 3, lines 29-33*). The carrier tape can further be a single-layer or multi-layer.

Schenz fails to disclose that the sheet has a tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3.

Maeda discloses a cover tape for packing chip type electronic parts comprising a layer with surface resistance of  $10^{13}$  ohms pre ohms square or less that comprises a thermoplastic resin such as polyvinyl chloride resin, polyester, etc. and 10-100 parts by weight conductive fine powder, such as carbon black (*col. 4, lines 5-26*). The antistatic material has conductivity by itself and accordingly has antistatic effect semi-permanently, and does not cause bleeding, etc. and therefore does not adversely affect the sealing property of the adhesion layer, the surface resistance of the adhesion layer is controlled at a level of  $10^{13}$  ohms pre ohms square or less and hence, no static electricity is generated by the contact of the electronic parts during transportation of the package, or at the time the of peeling of the cover tape for pick-up electronic parts, whereby the electronic parts can be prevented from troubles due to static electricity (*col. 4, lines 32-45*). Furthermore, in order to enhance the antistatic effect, an antistatic layer or conductive layer may be provided on both sides of the outer layer (*col. 4, lines 46-48*).

While the examiner notes that Maeda is disclosing a cover for a carrier tape and Schenz is disclosing a carrier tape, they are both trying to solve a similar problem. They are both trying to reduce static in electronic packaging.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have add Maeda's conductive fine powder to the thermoplastic resin of Schenz in order to enhance the antistatic property of Schenz and in sure no static electricity is generated by the contact of the electronic parts during transportation of the package, or at the time the of peeling of the cover tape for pick-up electronic parts, whereby the electronic parts can be prevented from troubles due to static electricity (*Maeda col. 4, lines 32-45*). Furthermore, it would have been obvious to one of ordinary skill in the art at the time of the invention to as an electrically conductive surface layer to Schenz as taught by Maeda in order to enhance the antistatic effect (*Maeda col. 4, lines 46-48*).

Furthermore, the limitation "the sheet has a tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3" is deemed to be a latent property of the prior art since the prior art is substantially identical in composition and structure, unless Applicant presents evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. MPEP 2145 (II). The Examiner's basis for this assertion is that Applicant's carrier tape has the same composition and the article can be made by any conventional method (*specification page 4, lines 16-23*) . Applicant discloses that carrier tape comprises a thermoplastic resin, such as polyvinyl chloride resin, polyester, etc., and an electrically conductive filler, such as carbon black (*specification page 4, lines 1-15*).

Alternatively, if the limitation "the sheet has a tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3" is not inherent, the exact tear strength of the carrier tape is deemed to be a result effective variable with regard to the peeling the cover tape off. It would require routine experimentation to determine the optimum value of a result

Art Unit: 1772

effective variable, such as tear strength, in the absence of a showing of criticality in the claimed tear strength. *In re Boesch*, 205 USPQ 215 (CCPA 1980), *In re Woodruff*, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990). One of ordinary skill in the art would have been motivated to increase the tear strength in order prevent premature peeling or tearing the packaging, whereby the electronic parts can be prevented from troubles due to static electricity.

5. Claims 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schenz et al. (U.S. Patent No. 5,361,901) in view of Miyamoto (JP Patent No. 08258888) with machine translation.

Schenz discloses an embossed carrier tape (*title*) comprising a sheet having at least one embossed pocket (*figure 2 and col. 6, line 5*) comprising at least one thermoplastic resin other than a polyphenylene ether resin (*col. 5, lines 62-68*), wherein at least on surface of the sheet has a surface resistance of at most  $10^{12} \Omega/+$  (*col. 3, lines 29-33*). The carrier tape can further be a single-layer or multi-layer.

Schenz fails to disclose that the sheet has a tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3.

Miyamoto discloses a cover tape for an embossed carrier tape (*title*) which comprises a sheet comprising a thermoplastic resin, since the reference discloses that the sheet is made of an ethylene-alpha olefin copolymer (*machine translation page 2, line 8*). The sheet has a base layer and a surface layer having a surface resistance of at most  $10^{12} \Omega/+$  on both sides of the base layer, since the reference discloses that the tape comprises a biaxially oriented polyester layer, i.e. a base layer, and an adhesive combined with a conductive powder, i.e. an electrically conductive layer (*machine translation page 2, lines 5-15 and figure 2*) and that the surface-

Art Unit: 1772

electrical-resistance values of a glue line are below  $10^{13} \Omega$ /+ (*machine translation page 2, lines 15-16*) and preferably below  $10^{10} \Omega$ /+ (*machine translation page 3, lines 13-14*). The sheet also having a tear strength of at least 105 N/mm as defined the Japanese Industrial Standard K-7128-3, since the reference discloses that the tape has a tear strength of 100 kg/cm or more, which is equivalent to 98 N/mm or more (*machine translation page 2, line 6*).

Miyamoto also discloses the sheet has a base layer and an electrically conductive layer, since the reference discloses that the tape comprises a biaxially oriented polyester layer, i.e. a base layer, and an adhesive combined with a conductive powder, i.e. an electrically conductive layer (*machine translation page 2, lines 5-15 and figure 2*).

While the examiner notes that Miyamoto is disclosing a cover for a carrier tape and Schenz is disclosing a carrier tape, they are both trying to solve a similar problem. They are both trying to improve materials used in electronic packaging.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have Schenz have a tear strength of at least 105 N/mm as defined the Japanese Industrial Standard K-7128-3 as taught by Miyamoto in order to increase the tear resistance of Schenz carrier.

It also would have been obvious to one of ordinary skill in the art at the time of the invention to have include an electrically conductive surface layer in Schenz as taught by Miyamoto in order to help dissipate static shocks.

***ANSWERS TO APPLICANT'S ARGUMENTS***

6. Applicant's arguments in the response filed April 7, 2006 regarding the 35 U.S.C. 103 rejection over Schenz in view of Miyamoto of record have been considered but are unpersuasive.

Applicant argues that the combination of Schenz and Miyamoto fails to suggest the limitations of claims 10-15 of an "embossed carrier tape comprising a sheet having at least one embossed pocket, wherein the sheet ... has a tear strength of at least 105 N/mm as defined in Japanese Industrial Standard K-7128-3." Applicant further argues that Schenz discloses a carrier tape and Miyamoto discloses a cover tape for a carrier tape.

While the examiner notes that Miyamoto is disclosing a cover for a carrier tape and Schenz is disclosing a carrier tape, they are both trying to solve a similar problem. They are both trying to improve materials used in electronic packaging and are themselves using almost identical material.

Applicant further argues that there is no reasonable expectation that the combination of Schenz and Miyamoto would lead an artisan to the claimed tear strength, because there is no recognition in the cited prior art that tear strength is an important factor in avoiding carrier tape breakage during use.

In response to Applicant's argument that there is no suggestion to combine the references, the Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make the proposed combination of primary and secondary references. However, there is no requirement that a motivation to make the modification be expressly articulated. The test for combining references is what the combination of disclosures taken as a whole would suggest to one of ordinary skill in



Art Unit: 1772

the art. References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures. In this case, one of ordinary skill in the art would recognize that both cover and carrier need to have improved tear strength so that the packaging does not tear prematurely.

As the examiner has stated before, Applicant's declaration filed May 27, 2005 is deemed to be unpersuasive because it is not commensurate in scope with the instant claims. Specially, the examples used in the declaration are made of specific polymers and have specific sheet thickness. None of which is claimed.

Note to Applicant – The Appeal Brief filed April 7, 2006 appears to be Defective because the summary of invention contains information that was not found in the claims. Specifically, what the carrier type is used for and the improvements discussed. However, the defectiveness of the Appeal Brief is moot in view of the Application being reopened. Applicant should be aware of this defectiveness if they choose to initiate a new appeal.

### ***Conclusion***


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Chevalier whose telephone number is (571) 272-1490. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ac  
9/30/05

  
ALICIA CHEVALIER  
PRIMARY EXAMINER